MARGINALIA

News item in the *Daily Egyptian*, the student newspaper at Southern Illinois University at Carbondale:

"WASHINGTON (UPI) — American women have made gains in wages, business and politics, but economic progress still eludes millions of minority women and female heads of families, a report said Wednesday.

"The ongoing study, 'The American Woman 1990-91: A Status Report,' by the Women's Research and Education Institute found that a barrier to economic security for many women is constant sex and racial segregation in the U. S. workplace."

That'll do it.

■

Perish the thought: A recent lunch menu at Pratt Institute listed, as an entrée, "Human Beef."

■

Unanimity in Indiana (from *The IU Newspaper*, a publication for the faculty and staff at Indiana University):

"The Council took up the proposed Student Rights and Responsibilities. . . .

"After discussion the code passed unanimously with one dissenting vote and no abstentions."

■

From *College Times*, a newspaper at Utah Valley Community College:

"With student enrollment rising every year, the need for a larger cafeteria may soon be a reality.

" 'Our biggest concern is seating space during the lunch hour,' says Ken Mathews. . . .

" 'With the new addition, we would also like to enlarge the men,' he added."

Let 'em eat cake.

■

Although the news appeared in many papers across the country, we like to think the record would not be complete without our noting it here: The 990 graduates in Annapolis this month received diplomas labeled "United States Navel Academy."

■

Job notice in Case Western Reserve University's *Campus News:*

"Assistant Director, Annual Giving / Medicine (Institutional Development—Assist with all aspects of annual fund with specific repressibility for reunion giving . . ."

Irrepressibility might be better.

■

And one in *The Community, Technical, and Junior College Times:*

"Utah Valley Community College is an accredited, comprehensive community college serving 7000 + students. . . . This executive reports to the Vice President for Academic Affairs. . . . $40,750 - $446,000 / year plus excellent benefit package."

Forget the benefit package; we'll take the job! —C.G.

In Brief

2 University Hospitals Eliminate 400 Jobs

WASHINGTON—Two university hospitals here laid off more than 400 non-medical employees last week to fight growing deficits, caused mainly by the cost of caring for uninsured patients.

Howard University Hospital cut 281 jobs, about 10 per cent of its work force, and George Washington University Hospital cut 150 positions, 6 per cent of its staff.

Officials at the universities said the cuts would not result in reduced patient care and would save each hospital approximately $10-million next year. The hospitals have planned other cost-cutting measures as well.

In recent years many hospitals have lost millions of dollars by providing care to abandoned babies and uninsured and homeless patients. Officials at both universities said their hospitals had deficits of between $10-million and $15-million.

Fraternity Suspended for 'Obscene' Newsletter

SANTA CLARA, CAL.—The California Lambda chapter of Sigma Phi Epsilon fraternity has been suspended for at least four years by Santa Clara University for using offensive language in a chapter newsletter last March.

The language was "repugnant, obscene, and wantonly degrading to women, racial minorities, and homosexuals," said James I. Briggs, vice-president of student services at the university.

Four members of the fraternity also were disciplined, but the university declined to release their names or to describe the punishment. Mr. Briggs said the university had withdrawn recognition of the chapter through the 1993-94 academic year, when the chapter may apply for reinstatement.

GORBACHEV VISITS STANFORD AT END OF U.S. TRIP

AP/WIDE WORLD

STANFORD, CAL. Soviet President Mikhail Gorbachev ended his seven-day trip to the United States last week with a two-hour visit to Stanford University (*above*), where he declared the cold war over and praised Stanford scientists for helping to curb the arms race.

In turn, Donald Kennedy, Stanford's president, lauded Mr. Gorbachev as "the architect of a great world transformation," and George P. Shultz, former U.S. Secretary of State and now a professor at Stanford, called him a "man of action" in building a new world order.

"We need you," Mr. Shultz said after Mr. Gorbachev's speech to some 1,700 faculty members, administrators, students, and visitors in the Stanford Memorial Auditorium.

During a stop in Minnesota, the Soviet President endorsed plans for an advanced research institute there that would bring together scientists from the United States, the Soviet Union, and other nations. The institute is to be called the Gorbachev Maxwell Institute of Technology. Robert Maxwell, who heads an international publishing empire, pledged $50-million to the institute if Minnesota Gov. Rudy Perpich and business leaders in the state could raise a matching $50-million. The idea for the institute was first proposed by Mr. Perpich. ■

Animal-Rights Protests Costly to Medical Colleges

WASHINGTON — Actions by people opposed to research using animals have cost medical colleges more than $15-million over the past five years, says a report released last week.

The report was based on a survey of the 126 college members of the Association of American Medical Colleges.

Seventy-six of the institutions reported a total of 3,700 incidents that they attributed to animal-rights activists—including harassment, vandalism, break-ins, and protest demonstrations.

"This serious threat to the nation's war against disease is not getting the attention it deserves," said Robert G. Petersdorf, president of the association.

The incidents cost colleges nearly $3.5-million and led them to spend another $3.2-million on

More Than Half of Blacks and Hispanics Said to Live 'at the Margin'

By DENISE K. MAGNER

WASHINGTON

While one-third of all blacks and Hispanics in the United States are earning middle-class incomes, more than half continue to live "at the margin" or in poverty, according to a report by the Business–Higher Education Forum.

The report, "Three Realities: Minority Life in the United States," was released last week. Created by the American Council on Education, the forum is a coalition of 90 chief executives from corporations and academe.

The report said public-policy makers, business, and higher education should not treat all minority citizens as if their problems were the same. It recommended ways to bolster what it called America's growing minority middle class, along with other measures to aid unskilled workers and the underclass.

"Monolithic generalizations just won't work any more—if they ever did—either to describe the problems or find solutions," said Clifton R. Wharton, who served as co-chairman of the forum's committee on minority issues that prepared the report. His co-chairman on the 20-member committee was Steven C. Mason, president of the Mead Corporation. Mr. Wharton is head of the Teachers Insurance and Annuity Association–College Retirement Equities Fund, higher education's largest pension companies.

New Aid Programs Sought

The report's use of the term "three realities" refers to the three income groups into which most blacks and Hispanics fall: the middle class, the working poor, and the underclass.

Among its other recommendations, the report said financial-aid programs for higher education should be restructured to provide qualified students with grants, rather than loans, in their first two years of college.

JEFF DODGE

Clifton R. Wharton: "Monolithic generalizations just won't work anymore—if they ever did—to find solutions."

It also recommended that higher education look at new ways to increase recruitment and retention of minority students, such as the creation of "prep year" programs on campuses to prepare minority students for college. Many of the report's recommendations are similar to ones made in other recent reports on minority life.

The committee did not determine a price tag for its recommendations, nor did it explain in the report where the money would come from to finance the proposed measures.

At a news conference, however, Mr. Wharton and Mr. Mason said a majority of the committee members would support a federal tax increase to finance the report's proposals if there were no other financing options.

Copies of the report are available for $15 from the Business-Higher Education Forum, American Council on Education, Suite 800, One Dupont Circle, Washington 20036. ■

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1990 Job Market Seen as Most Competitive in Years

Continued From Preceding Page

says. "Right now, I'd take just about any job in business."

Career prospects are not bleak for everyone, however. Students are landing positions in such fields as education, accounting, engineering, computer science, printing and publishing, and health services, according to the Michigan State study.

The Michigan State study drew responses from 479 employers representing businesses, elementary and secondary schools, government agencies, and the military services. Employers were asked about hiring trends and factors that are influencing the job market.

Declines Across the Board

The study found that employers in the automotive- and mechanical-equipment industry expect to hire nearly 60 per cent fewer workers this year than they did last year, the largest decline of all sectors of the economy. The electrical-equipment and electronics industry expects to hire about 25 per cent fewer workers.

Federal, state, and local governments plan to hire 20 per cent fewer employees, while the aerospace industry anticipates a 20-per-cent decline. The four branches of the military plan a 17-per-cent cutback in new employees. In addition, the banking, finance, and insurance industries expect to hire about 2 per cent fewer workers this year than they did in 1989.

Companies and industries facing cutbacks often eliminate new positions before firing veteran employees, so it is no surprise that college graduates are feeling the effects of the hiring squeeze.

"There are a lot of kids who are going to leave campus without positions, but they shouldn't be discouraged."

"Things looked strong in the fall, but then this spring we started getting calls from a lot of the big firms saying that they wouldn't be recruiting because of cutbacks," said Victor R. Lindquist, the director of placement at Northwestern University.

The job market is more competitive in some parts of the country than in others. States in the Midwest that depend on the auto industry have been hard hit, as have New York and Massachusetts, where the financial industry is important.

In California and the Sunbelt, on the other hand, the economy is growing. At the University of Florida, for example, about 700 corporations sent recruiters this year, a slight increase over last year.

"There has been some weakening in retailing, finance, and marketing, but we're in a booming economy here," says Maurice Mayberry, director of the career-resource center. "It's very attractive to corporations to be a part of the Sunbelt."

Priscilla Scotlan, acting director of career planning and placement at the University of California at Berkeley, says she has seen a slight increase in the number of recruiters visiting the campus. But she says it's too early to know how many students had jobs lined up when they graduated.

Persistence May Pay Off

According to the Michigan State report, students who graduate with bachelor's degrees can expect an average annual starting salary of $25,256, a 3.3-per-cent increase from 1989.

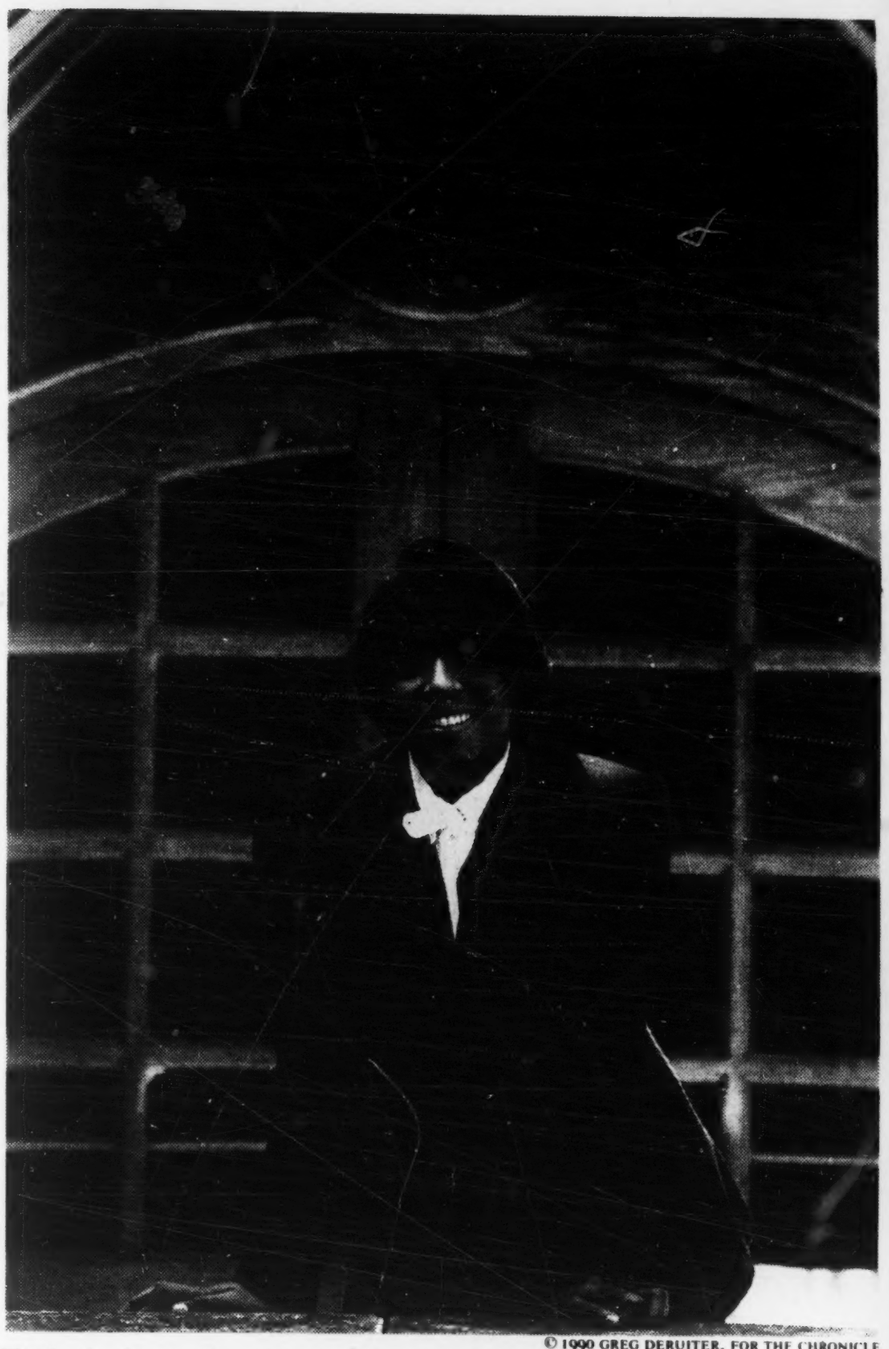
Chemical engineers will have the highest average starting salaries, $33,380, while home-economics majors will have one of the lowest, $18,157.

Many students are still waiting for job offers. Tonia Jackson, who graduated from Michigan State last month with a major in human resources, has been interviewing for jobs in personnel administration since April and has not received a single offer.

"I know my field is very competitive and they have a preference for people with master's degrees, but I'm not going to let that discourage me," says Ms. Jackson. She says she will keep trying to get interviews. If necessary, she says, she will move to another city to look for a job.

That kind of persistence may be necessary in this year's job market, says Mr. Lindquist. "There are a lot of kids who are going to leave campus without positions, but they shouldn't be discouraged," he says.

"If they do their homework, research their industry, and start knocking on doors, many of them will have a job by early fall." ■



© 1990 GREG DERUITER, FOR THE CHRONICLE

Tonia Jackson: "I know my field has a preference for master's degrees, but I'm not going to let that discourage me."

Emory Will Not Prosecute Black Student Who Said She Was Victim of Harassment

ATLANTA

Emory University will not press charges against a black freshman who claimed to be the victim of racial threats and harassment on the campus but whose allegations were found by state and local police agencies to be a hoax.

The incident involving Sabrina Collins provoked controversy and protests on Emory's campus this spring. In March, Ms. Collins reported that her dormitory room had been vandalized and defaced with racial slurs. She also told the police she had received death threats through the mail.

After investigating the case for several weeks, amid growing speculation about Ms. Collins's allegations, the local District Attorney's office announced that it had found "insufficient evidence" to support her claims, and "substantial evidence" contradicting her statements. The police stopped short of specifically implicating Ms. Collins in the incident, but said there was no evidence that anyone had harassed her.

AP/WIDE WORLD

Sabrina Collins: Police found "substantial evidence" contradicting her statements about racial harassment.

'Counseling, Not Prosecution'

Lawyers for Ms. Collins have continued to maintain that she did not stage the incident.

Ralph T. Bowden, solicitor for DeKalb County, called Emory "the most easily identifiable victim in this case." He said Ms. Collins might need "counseling and treatment, not prosecution."

Jan Gleason, a spokeswoman for Emory, said the university would not seek prosecution of Ms. Collins. In April, James T. Laney, Emory's president, responded to the first reports of the alleged incident by announcing several measures to improve the campus climate for minority students. Among other proposals, he recommended the creation of a multicultural student center to provide minority students with academic support and mentors, and to sponsor racial-awareness programs.

Ms. Gleason said the university still planned to proceed with the measures announced by Mr. Laney. Emory officials met last week to discuss how to implement and finance the proposals.

J. Thomas Bertrand, assistant to the president and secretary of the university, said the incident—hoax or not—had forced Emory to pay attention to issues of cultural diversity on its campus.

"As painful as the Sabrina Collins case has been for all of us," he said, "from Sabrina down through the rest of the university, it's been a time of real growth."

—DENISE K. MAGNER

FACT FILE: 1989 Freshman Merit Scholars

This table shows the 57 colleges and universities enrolling the largest numbers of freshman Merit Scholars named in 1989.

The table shows the total number of Merit Scholarship winners and the number whose scholarships were paid for by the institution, not by the National Merit Scholarship Corporation or other corporate sponsors.

The rankings were determined by *The Chronicle* from an alphabetical listing appearing in the 1989 annual report of the National Merit Scholarship Corporation.

Over all, 6,290 freshman Merit Scholars were enrolled—3,638 at 228 private institutions and 2,652 at 138 public institutions.

	Number of scholars	Number sponsored by institution
1. Harvard and Radcliffe Colleges	314	0
2. University of Texas at Austin	217	163
3. Stanford University	203	0
4. Rice University	198	130
5. Yale University	169	0
6. Princeton University	141	0
7. Carleton College	123	102
8. Massachusetts Inst. of Technology	113	0
9. University of Chicago	111	83
10. Georgia Institute of Technology	109	78
10. Texas A&M University	109	84
12. University of Florida	96	85
13. Northwestern University	94	55
14. University of Michigan	87	0
15. Duke University	83	9
16. Brigham Young University	82	60
17. Michigan State University	80	67
18. Virginia Polytechnic Inst. and State University	75	58
19. U. of California at Los Angeles	74	60
20. University of Houston	69	58
20. University of New Orleans	69	62
22. Brown University	61	0
23. Cornell University	60	0
24. Bowling Green State University	58	44
25. University of California at Berkeley	55	4
26. Washington University (Mo.)	54	31
27. Williams College	53	0
28. University of California at San Diego	51	39
29. University of Oklahoma	50	40
30. University of Kansas	49	40
31. Harvey Mudd College	48	43
32. Trinity University	47	36
32. University of Minnesota–Twin Cities	47	37
34. Florida State University	46	40
35. Baylor University	44	35
36. University of Arizona	43	30
37. Macalester College	42	34
38. Iowa State University	40	39
38. Vanderbilt University	40	24
40. Oberlin College	39	27
40. University of Illinois at Urbana–Champaign	39	0
40. University of Iowa	39	25
43. University of Virginia	38	0
43. Dartmouth College	38	0
43. University of Pennsylvania	38	0
43. Ohio State University	38	26
47. University of Delaware	37	28
48. Auburn University	35	27
49. University of Notre Dame	34	0
49. University of Southern California	34	21
51. St. Olaf College	33	26
52. University of North Carolina at Chapel Hill	31	0
52. University of Missouri at Columbia	31	26
54. Georgetown University	30	0
54. Oklahoma State University	30	25
54. Tulane University	30	16
54. University of Toledo	30	24

SOURCE: NATIONAL MERIT SCHOLARSHIP CORPORATION

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News Summary

Articles on inside pages

A new psychological association appears to be proving its worth to behavioral-science researchers, 18 months after its birth: Page A5.

The A.A.U.P. voted to censure four administrations for what it called violations of faculty rights and to review the case of a professor denied tenure in 1987: Page A15.

Partnerships between colleges and schools are the best way to reform education, experts said at a meeting to evaluate collaboration: Page A15.

A bill to reauthorize federal support of the arts and humanities was approved by a committee and sent to the full House: Page A23.

States are being urged by the Southern Regional Education Board to gather more complete information on how their students are performing at all educational levels: Page A23.

The N.I.H. is not following its requirement that federal research deal with the needs of women as well as men, a report has charged: Page A27.

Welcome to the world of "Tank McNamara," which for 16 years has poked fun at the foibles and fumbles of college and pro sports: Page A34.

Peru's president-elect is hoping its universities can help the country out of unprecedented poverty, inflation, and political violence: Page A37.

Dwindling financial resources are prompting Canadian colleges to sell their land to developers: Page A37.

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Many Student Loans by Bankrupt Lenders May Go Uncollected

Could total hundreds of millions and affect colleges' default rates

By THOMAS J. DeLOUGHRY

WASHINGTON

Federal officials sorting through the wreckage of the savings-and-loan debacle may find hundreds of millions of dollars' worth of guaranteed student loans that nobody is attempting to collect.

Education Department officials, who don't know how many such loans are held by bankrupt savings-and-loan associations, worry that some may never be repaid. The longer the loans are dormant, the more difficult it will be to track down the borrowers and make sure they pay their debts, the officials say.

The uncertainty also casts new doubts on the accuracy of college-by-college default rates that Education Department officials recently compiled. Officials are checking to see if loans held by bankrupt lenders were properly accounted for in those calculations.

Disciplinary Action Possible

The accuracy of the default rates is a source of particular concern among college officials, since institutions with high rates may be subject to disciplinary action from the Education Department.

Education Department officials have been talking to officials of the Resolution

Continued on Page A27

1980's Craze for Building Technology Parks Is Over

Universities have found that developing start-up companies from faculty members' discoveries is harder than they expected: Page A29.

A DIFFERENT KIND OF BUSINESS

Years of Adversity, Decade of Growth Change Face of University Publishing

By ELLEN K. COUGHLIN

Twenty years ago the bottom fell out of the market for scholarly books, and university presses have never been the same again.

After a painful period of tightening belts and learning to pay more attention to the financial side of publishing, the presses as a group have emerged as bigger, healthier, more diverse, and in many ways more interesting operations. They are publishing, and selling, more books—and a greater variety—than ever before.

This week's annual meeting in Philadelphia of the Association of American University Presses bears witness to the fact that university publishing is a different kind of business today. Members will discuss "global perspectives" and marketing to Japan, talk about CD-ROM's and trade books, and consider how university presses fit into the changing system of scholarly communication.

"People in this business used to refer to 'pure tobacco,'" says J. G. Goellner, director of the Johns Hopkins University Press. "University presses were 'pure-tobacco growers': They published only pure, fine scholarship.

"You don't hear that anymore."

How the change in university publishing has affected "pure, fine scholarship" is not clear, however. No one believes that the specialized academic book is in any danger of disappearing—quite the opposite, many say. But some university-press officials worry that

Continued on Page A8

Political Reforms in Eastern Europe Provide Big Boost for Student-Exchange Programs

By SUSAN DODGE

Political reforms prompted by *glasnost* are inspiring thousands of college students in the United States and eastern Europe to take part in exchange programs sponsored by colleges and universities on both sides of the Atlantic.

American and eastern European students are already taking dozens of courses through such exchanges, and the number of participants is expected to increase in the fall. Students from eastern-bloc countries are also beginning to apply to U.S. institutions, hoping to earn undergraduate and graduate degrees.

"I think there could soon be an explosion in the number of applications from eastern Europe to U.S. colleges," says James Crowder, dean of international admissions at Macalester College. Twenty Soviet and eastern European students applied to Macalester this spring. Only one student from an eastern-bloc country applied to the college last year.

So far, the majority of Soviet and eastern European students coming to the United States are doing so through exchanges, some as short as a week and others as long as an academic year. Students are traveling from Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania, the

Continued on Page A31

Faculty Generation Gap Brings Campus Tensions, Debates Over Rating of Professors

By CAROLYN J. MOONEY

As more colleges and universities raise their expectations for scholarly research, some observers fear that a generation of faculty members is being left behind.

Hoping to gain both prestige and financial support for research, many four-year institutions have gradually toughened their promotion and tenure standards to require more and better research. Some professors who came to those institutions 15 or 20 years ago have watched as younger, more aggressive scholars surpassed them—in the quality and amount of scholarship, in their perceived value to the campus, and, in some cases, in salaries and perquisites.

The result is a kind of faculty generation gap that on some campuses has led to tensions, morale problems, and thorny debates over how professors should be evaluated and by whom.

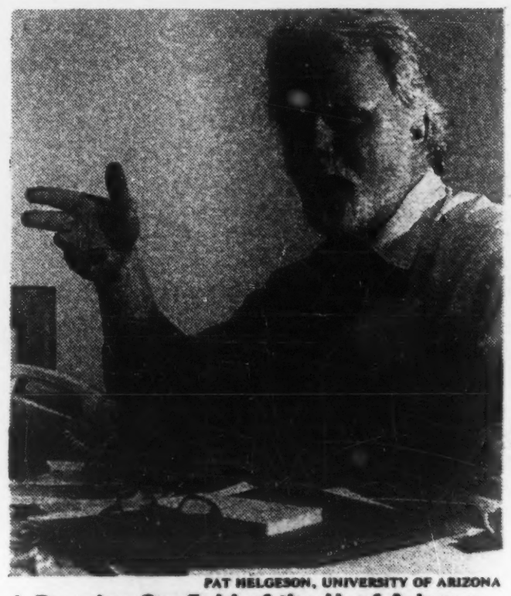
"There's almost two faculties—the young Turks and the old guard," says Peter Seldin, a professor of management at Pace University and a faculty-development consultant. "You get the older faculty saying the rules of the game were changed on them."

'Stagnant,' 'Disengaged,' 'Worn Out'

The problem is widespread enough that one speaker at a recent academic conference suggested that terms like "deadwood," "stagnant," "disengaged," "worn out," and "over the hill" be banished from conversations about professors. But that was wishful thinking: If anything, such language seems to be more common in the academy these days.

Observers are quick to point out that many productive senior scholars remain current in their disciplines and adapt to more rigorous standards, just as some jun-

Continued on Page A18



PAT HELGESON, UNIVERSITY OF ARIZONA

J. Douglas Canfield of the U. of Arizona: Because standards are tougher, "people who got tenure on two to three articles before wouldn't get tenure today."

MARGINALIA

Summer is here—and, with it, the results of the Marginalia summertime contest. This year we asked our readers to send us examples of exam-paper bloopers by their students, and the avalanche of entries took even us off guard. The first batch of winners:

■

From Terry Ogden,
The University of Manitoba

"I asked my students how Shakespeare uses sound poetically in Sonnet 116. One student wrote:

" 'A wonderful example of this is found in line 7 [Love . . . is the star to every wand'ring bark]. "Bark" refers to the call of a lost person searching for his / her true love. The reader can almost hear this call from reading one simple word.' "

■

From Robert L. Stivers,
Pacific Lutheran University

"My gut level reaction, the thing that keeps coming back to my mind . . ."

■

From Craig St. John,
The University of Oklahoma

"Before the Demographic Transition a lot of people died from the blue-bonnet plague."

■

From James G. Czarnnecki
(and several friends),
University of Nebraska at Omaha

"As art historians, my colleagues and I have received many bloopers over the years, primarily in the identification of works of art. Herewith, some of my favorites (along with the correct identifications, for those who might not recognize them):

" 'Giotto's *Lamination of Christ*' (Lamentation)

" 'Andrea del Sarto's *Madonna of the Herpes*' (Harpies)

" 'Michelangelo's *Sixteenth Chapel*' (Sistine Chapel)

" 'Rembrandt's *Cynics of the Cloth Guild*' (Syndics)

" '*Michelangelo's David* by Leonardo da Vinci.'

" 'Rubens's *Rape of the Daughters of Leviticus*' (Leucippus)"

■

From C. Brown,
The University of Florida

"Aristotle said the goal of life was happiness—which turns out to be sin."

"Media killed her two children; this is the source of the expression 'Media event.' "

■

From John A. Stefferud,
Springfield Technical Community College

"When a kid wants to kill his father and marry his mother it's called the odius complex."

"Without an education you'll never pass mustard."

■

More in weeks to come. —C.G.

In Brief

Virgin Islands Laboratory Will Not Be Rebuilt

TEANECK, N.J. — Fairleigh Dickinson University has decided not to rebuild its underwater research laboratory in the U.S. Virgin Islands. The facility was heavily damaged last September by Hurricane Hugo.

Frank J. Mertz, president of the university, announced this month that the Board of Trustees had voted to close the West Indies Laboratory on St. Croix.

In a letter to the campus community, Mr. Mertz wrote: "The trustees and the administration had to conclude that we cannot at this time afford to run a facility that annually operates in the red and serves relatively few Fairleigh Dickinson students."

Mr. Mertz said the damage caused by the storm had forced officials to reexamine how the lab fit into the university's marine-biology program. The university will continue to offer the program and has made arrangements for its students to gain field experience at a Duke University laboratory in North Carolina.

Offensive Cartoon Sparks Incidents in Dormitory

EAST LANSING, MICH.—Michigan State University has suspended a student who repeatedly posted a racially offensive cartoon on his dormitory door and threatened people who tore it down.

The student, James Williams, a pre-law major, was suspended for three quarters by a university judiciary committee.

University officials said Mr. Williams had not been punished for posting the cartoon on his own door but for posting it on a dormitory bulletin board and for repeatedly threatening people who tried to remove it.

Marie Hansen, assistant director of student life, said Mr. Williams had been suspended for verbal threats and abuse, noise violations, and for posting unauthorized material on a residence-hall bulletin board.

Local news accounts said the cartoon showed two white students painting themselves black and joking that they had figured out how to win scholarships without having to work for high grades. Mr. Williams said he had persisted in putting the cartoon up "for the principle of the thing."

Discrimination Charge Settled at U. of Alabama

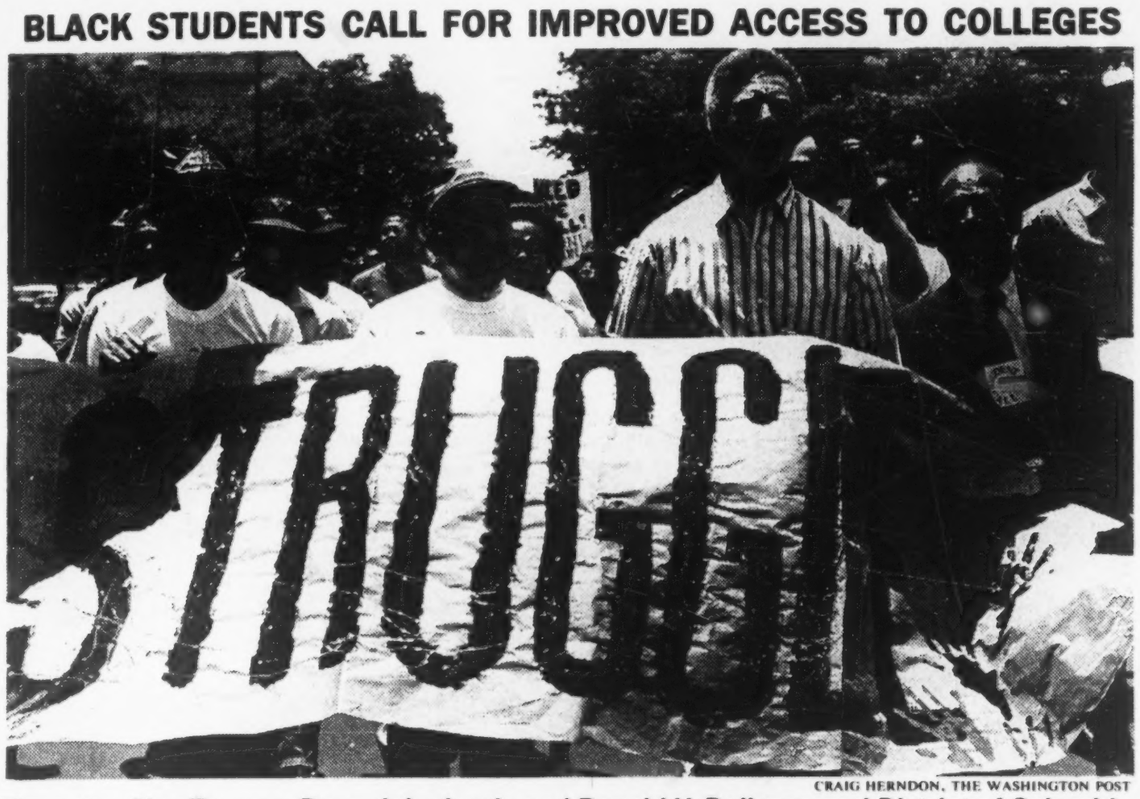
BIRMINGHAM, ALA.—The University of Alabama at Birmingham has agreed to pay $25,000 to a group of 70 black job applicants who were allegedly denied employment because of their race.

The money is part of a settlement between the university and the U.S. Department of Labor.

In reaching the settlement, the university "expressly denied" that it had discriminated against minority applicants seeking clerical positions, said Ina B. Leonard, the university counsel. Ms. Leonard said the university did see instances where its employment procedures had not been followed and had since amended those procedures.

The Labor Department conducts audits of institutions that have federal contracts. After auditing the university, the department charged that Alabama had violated an executive order prohibiting discrimination in hiring. Because the two sides reached a

BLACK STUDENTS CALL FOR IMPROVED ACCESS TO COLLEGES



CRAIG HERNDON, THE WASHINGTON POST

The actor Glen Turman, Reps. John Lewis and Ronald V. Dellums, and District of Columbia Council Member Harry Thomas join the march by black college students.

WASHINGTON

Several hundred black college students converged on Washington last week to participate in protests and teach-ins aimed at urging political leaders to focus on improving minority students' access to higher education.

The students, who came from colleges across the country, also protested poor race relations on campuses and called for more grants than loans in financial-aid programs for students.

The National Collegiate Black Caucus sponsored the events, which included a march from the Education Department to Lafayette Square, across from the White House.

Congressmen Lobbied

After the march, the students held a rally that featured such speakers as Rep. Ronald V. Dellums, Democrat of California; the Rev. Jesse L. Jackson; and members of the rap group Public Enemy.

The National Collegiate Black Caucus was formed last September after the Congressional Black Caucus held a summit meeting for students, said Melanie Campbell, executive secretary of the student group. The collegiate caucus is based in Atlanta.

More than 100 black students participated in teach-ins at Howard University on subjects ranging from racism and sexism to the problems in South Africa and other trouble spots in the world. Students also met with members of Congress to lobby them on student-aid and other issues.

—DENISE K. MAGNER

'Alternative' Certification Plans Draw Few New Teachers, Report Concludes

WASHINGTON

Although 33 states have "alternative" programs for certifying schoolteachers, their plans have failed to attract large numbers of college-educated adults into the classroom, concludes a report released last week.

"Very few states in this nation have actually designed a program specifically to meet the demand created by the new and growing market of adults who already have at least a bachelor's degree and want to obtain a license to teach," said C. Emily Feistritzer, author of the report and director of the National Center for Education Information, a private education-research organization based here.

Alternative-certification plans typically allow public schools to employ as teachers people who have a college degree in a subject other than education. A survey of the states found that 33 had such plans, Ms. Feistritzer said, up from 8 in 1983. She estimated that 12,000 people had received teaching certificates through alternative programs in the past five years. Over the same period, she said, schools have hired about one million new teachers.

Despite their growing popularity among state officials, alternative-certification plans have proved controversial. While supporters praise the non-traditional programs for bringing fresh talent into the classroom, critics condemn them as shortcuts that allow unqualified people to teach (*The Chronicle*, May 9).

Programs Are Varied

Ms. Feistritzer said that alternative-certification programs varied tremendously across the country. Three states, Connecticut, New Jersey, and Texas, provide such programs at all grade levels and in all fields. Other states, including California and New York, allow alternative certification only if a teacher with traditional credentials cannot be found.

To attract experienced adults who want to become schoolteachers, Ms. Feistritzer recommended that states not limit their programs to fields with teacher shortages. In addition, she urged states to publicize their programs more widely and to provide program participants with mentors.

Copies of the report, "Alternative Teacher Certification: A State-by-State Analysis 1990," are available for $24.95, prepaid, from the National Center for Education Information, 4401-A Connecticut Avenue, N.W., Room 212, Washington 20008. —J.E.

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FACT FILE: 1988-89 Holdings of Research Libraries in U.S. and Canada

University Libraries

	Rank[1]	Volumes in library	Volumes added	Current serials	Total staff	Total expenditures[2]
Harvard U.	1	11,781,270	336,649	102,000	1,065	$40,905,537
U. of California at Berkeley	2	7,366,672	195,076	103,944	773	29,480,699
U. of California at Los Angeles	3	5,976,588	188,733	93,549	728	29,349,137
Stanford U.[3]	4	5,753,147	320,601	56,343	610	28,674,297
Yale U.[3]	5	8,718,619	188,616	52,496	680	26,896,746
U. of Illinois at Urbana-Champaign	6	7,561,615	188,468	92,445	540	17,194,948
Columbia U.	7	5,894,135	166,476	63,841	656	22,852,784
U. of Texas	8	6,066,136	181,571	78,446	589	17,925,133
U. of Toronto	9	5,821,745	181,590	34,053	716	24,574,320
U. of Michigan	10	6,237,521	119,296	68,299	592	21,111,158
Cornell U.[3]	11	5,144,830	126,812	61,369	527	19,487,745
U. of Washington	12	4,815,209	152,461	49,282	493	18,936,832
U. of Wisconsin	13	4,908,985	108,834	48,085	508	19,091,165
U. of Minnesota	14	4,537,087	97,527	47,010	465	19.213,314
U. of Chicago	15	5,063,051	96,350	50,663	367	14,852,685
Rutgers U.[3]	16	3,129,861	113,110	28,433	525	21,860,812
U. of North Carolina	17	3,635,509	127,838	41,758	413	15,245,467
Princeton U.	18	4,175,904	110.908	31,414	383	15,966,013
Ohio State U.	19	4,338,474	99,622	32,005	462	16,127,336
Pennsylvania State U.	20	3,043,837	85,650	30,345	449	16,668,127
Indiana U.	21	4,045,828	87,861	25,699	465	15,425,406
Arizona State U.[3]	22	2,466,274	133,883	34,001	381	13,877,587
U. of Georgia[3]	23	2,788,311	100,079	57,950	352	11,668,634
U. of Pennsylvania	24	3,576,227	86,296	30,419	369	15,434,175
U. of California at Davis	25	2,306,831	89,236	51,486	332	15,038,004
Duke U.	26	3,757,814	96,563	30.018	319	13,758,604
U. of British Columbia	27	2,817,779	109,572	21,499	415	14,144,640
U. of Virginia	27	3,091,445	102,040	25,693	366	15,257,838
U. of Arizona	27	3,424,698	99,861	28,808	386	13,232,559
New York U.	30	3,031,621	74,628	29,499	382	16,424,012
U. of Florida	30	2,782,279	100,629	29,542	389	14,385,607
Michigan State U.	32	3,373,215	114,521	28,754	325	12,306,366
U. of Alberta[3]	33	2,844,697	83,889	19,426	402	13,371,072
U. of Southern California[3]	34	2,580,183	55,566	37,297	371	14,338,464
U. of Pittsburgh	35	2,789,211	91,980	22,259	355	11,901,697
Johns Hopkins U.	36	2,784,642	65,648	20,327	324	14,217,404
McGill U.	36	2,477,288	98,201	17,447	318	12,759,722
U. of Iowa	38	3,018,599	93,259	24,119	266	10,553,903
U. of Kansas	38	2,793,134	71,272	27,857	316	11,446,035
U. of California at San Diego	40	1,888,207	65,414	30,225	339	13,457,087
U. of Maryland	41	1,993,077	68,531	22,526	342	12,115,457
Wayne State U.	42	2,309,698	80,239	24,588	238	11,320,503
Howard U.	43	1,729,875	60,884	27,931	224	11,427,835
U. of Western Ontario	44	1,912,689	71,644	18,860	291	10,183,315
U. of Hawaii	45	2,312,229	70,287	32,257	236	8,712,084
U. of California at Santa Barbara	46	1,927,290	67,973	21,497	250	11,036,818
U. of Connecticut[3]	47	2,210,528	70,032	19,499	233	12,122,828
Georgetown U.	47	1,737,381	71,282	21,241	296	10,765,556
U. of Laval	49	1,723,632	72,012	15,184	271	10,574,873
Massachusetts Institute of Technology	50	2,141,174	52,288	21,019	258	9,916,248
Louisiana State U.	51	2,408,565	83,661	19,917	276	8,002,404
Boston U.	52	1,711,215	53,264	29,155	277	9,406,578
Vanderbilt U.	52	1,810,919	60,993	19,348	303	9,827,362
U. of Illinois at Chicago	54	1,610,165	55,925	17,660	295	10,367,454
Washington U. (Mo.)	54	2,221,176	53,549	18,841	235	10,069,892
U. of South Carolina	56	2,367,144	74,903	19,009	194	8,531,967
U. of Cincinnati	56	1,693,173	58,255	19,027	285	10,996,517
U. of Delaware	56	1,898,511	61,888	23,490	234	8,964,237
Emory U.	56	1,820,956	58,526	16,733	257	10,741,274
U. of Massachusetts	60	2,345,974	72,624	16,655	204	9,192,395
Purdue U.	61	1,867,691	60,029	21,042	271	8,696,953
Syracuse U.	61	2,285,707	43,468	20,614	269	8,929,768
U. of New Mexico	63	1,667,749	52,525	16,177	348	$10,645,139
Texas A&M U.	63	1,840,334	55,598	17,088	304	9,811,822
York U. (Ontario)	65	1,746,261	58,687	19,582	245	9,286,452
Brigham Young U.	66	1,997,272	73,741	18,715	330	9,213,729
Brown U.	67	2,172,889	50,664	13,464	265	9,406,004
U. of Rochester[3]	68	2,639,518	53,898	13,959	258	8,112,657
U. of Colorado	68	2,227,963	53,930	15,084	221	9,558,177
U. of Kentucky	70	2,118,822	43,917	19,123	278	7,892,099
U. of Tennessee	70	1,833,491	42,320	20,761	255	8,093,394
U. of Notre Dame	72	1,929,116	76,728	16,602	190	6,772,138
U. of Miami	72	1,656,659	52,333	15,478	255	9,095,200
U. of California at Irvine	74	1,395,955	54,085	16,467	228	10,481,056
U. of Missouri	75	2,446,491	38,961	17,073	238	7,520,902
Southern Illinois U.	76	2,039,345	46,037	21,275	250	7,851,734
Dartmouth College	77	1,774,175	53,544	20,533	173	7,982,175
U. of Utah	78	1,757,847	53,739	14,338	229	7,367,725
Virginia Polytechnic Institute and State U.	79	1,673,005	46,367	18,412	221	8,051,309
Florida State U.[3]	80	1,764,116	49,714	18,656	231	7,468,986
U. of Nebraska	81	1,967,758	46,367	17,626	209	7,081,454
U. of Waterloo	82	1,630,870	52,492	14,598	206	7,637,308
Temple U.[3]	82	2,034,523	38,777	15,171	232	7,602,237
U. of Oregon	84	1,844,650	41,937	21,024	217	7,736,764
Iowa State U.	84	1,792,018	43,218	18,627	218	7,508,324
Queen's U. at Kingston	84	1,748,868	36,848	15,747	218	7,999,497
State U. of New York at Stony Brook	87	1,654,860	42,737	11,211	224	9,090,506
Washington State U.	88	1,561,376	34,616	21,962	209	7,843,297
Tulane U.[3]	89	1,759,026	44,575	16,767	180	6,950,382
U. of Oklahoma	90	2,261,724	39,348	17,588	183	6,617,399
Kent State U.[3]	91	2,010,760	35,110	10,561	251	8,893,468
U. of Manitoba	91	1,491,876	35,260	12,368	232	8,197,539
Case Western Reserve U.	93	1,559,365	33,112	12,345	181	6,708,322
McMaster U.	94	1,338,532	44,879	11,607	200	8,506,271
U. of Guelph	95	1,837,164	57,981	12,987	155	5,432,538
U. of Saskatchewan	95	1,372,707	52,592	10,748	179	7,358,922
U. of Alabama	97	1,772,934	42,959	17,441	176	6,137,694
North Carolina State U.	98	1,263,969	34,343	13,349	220	8,341,223
U. of Houston	99	1,598,010	38,222	16,490	205	6,355,605
Oklahoma State U.[3]	100	1,524,543	47,767	11,976	186	6,806,752
U. of California at Riverside	101	1,414,570	47,757	9,103	191	6,609,674
State U. of New York at Albany[3]	102	1,253,476	37,432	14,756	167	6,544,051
Georgia Institute of Technology	103	1,611,773	35,753	23,580	122	4,525,114
Colorado State U.	104	1,182,764	45,006	11,284	141	6,373,166
Rice U.	n/a	1,403,820	36,127	12,153	148	5,744,939
State U. of New York at Buffalo	n/a	2,534,391	60,888	23,264	293	11,008,544

Non-University Libraries

	Volumes in library	Volumes added	Current serials	Total staff	Total expenditures[2]
Boston Public Library	6,141,482	247,610	16,704	645	$27,154,158
Canada Institute for Scientific and Technical Information, Ottawa, Ontario[3]	2,194,771	59,271	32,830	233	21,353,392
Center for Research Libraries, Chicago	2,932,277	39,271	13,045	71	2,622,824
Library of Congress, Washington	21,491,878	283,454	137,500	4,385	264,202,000
Linda Hall Library, Kansas City, Mo.	631,756	18,500	13,200	62	3,068,093
National Agricultural Library, Beltsville, Md.	2,029,323	35,889	24,000	212	15,876,783
National Library of Canada, Ottawa, Ontario	1,249,974	60,918	24,389	503	29,838,488
National Library of Medicine, Bethesda, Md.	1,916,769	43,960	26,385	267	18,204,000
Newberry Library, Chicago	1,426,879	6,853	6,200	103	5,936,700
New York Public Library, New York	6,279,773	95,504	152,114	822	33,179,805
New York State Library, Albany, N.Y.	2,109,165	45,829	22,076	212	9,307,180
Smithsonian Institution, Washington[3]	1,078,935	28,803	15,077	123	4,937,087

SOURCE: ASSOCIATION OF RESEARCH LIBRARIES

Note: Institutions are asked to report figures for their main campuses only, unless a branch campus is indicated. The list excludes Northwestern University; officials there would not submit survey data because of a U.S. Justice Department investigation concerning alleged collusion by some universities in the setting of tuition and student-aid levels.

1 Based on an index developed by the Association of Research Libraries to measure the relative size of university libraries. The index takes into account the number of volumes held, number of volumes added during the previous fiscal year, number of current serials, total expenditures, and size of staff. It does not measure a library's services, the quality of its collections, or its success in meeting the needs of users. Two institutions chose not to have their index figure calculated; they appear at the end of the list of university libraries.

2 Figures for Canadian libraries are expressed in U.S. dollars.

3 Includes branches as well as the main institution.

n/a Data not available.

Research Notes

Continued From Preceding Page

Sumerian times, before 3000 B.C. It is possible the archaeologists will find clay tablets concerning healing practices.

In addition to further excavation of the temple, the researchers plan to spend the next five years exploring its immediate environs, in an attempt to learn about the activity of the priests, administrators, and others who worked at the temple.

The University of Chicago's Oriental Institute has been responsible for excavating the temples of Nippur since 1948.

—ELLEN K. COUGHLIN

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With help from hundreds of friends around the world who ran programs overnight on some 1,000 computers, mathematicians last week succeeded for the first time in factoring a 155-digit number.

The number, they discovered, is the product of a seven-digit number, a 49-digit number, and a 99-digit number.

The feat has important implications in cryptography—the science of writing and deciphering codes—in which 150-digit numbers have regularly been used to protect encoded material because they are so hard to factor. In 1988, mathematicians factored a 100-digit number, the previous record.

As a result of this work, cryptographers may have to go to 200-digit numbers to protect secrets.

The factoring was done in two parts, says Arjen Lenstra, a researcher at Bell Communication Research in Morristown, N.J., who directed the project.

To complete the first part—building a data base of numbers that would help find the factor—Mr. Lenstra posted a request for help on Internet, an international computer-communications network for researchers. Mathematicians and computer scientists on campuses and in research centers all over the world offered time on their computers to find the numbers for the data base.

Says Mr. Lenstra: "We were looking for x and y such that the difference between x^2 and y^2 is divisible by n"—the 155-digit number. Mr. Lenstra then built a data base of numbers that could produce x and y.

After that, Mr. Lenstra says, it was "trivial." Using the parallel supercomputer at Florida State University, Mr. Lenstra found the greatest common dividers of x-y, and n, which were the factors he was seeking.

The 155-digit number was a particular challenge—the Ninth Fermat Number, $2^{512}+1$, "number one on the world list of the 10 most

Continued on Page A8